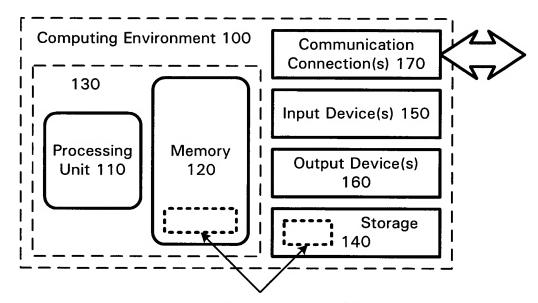
Inventor (s): Holcomb et al.
Date of Deposit: August 19, 2003
Express Mail Label No. EV331582817US
Title: MULTI-RESOLUTION VIDEO CODING AND DECODING
Attorney Matter No.: 3382-65017/KBR

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Figure 1



Software 180 Implementing Multi-Resolution Coding and/or Decoding Techniques

Inventor (s): Holcomb et al.

Date of Deposit: August 19, 2003

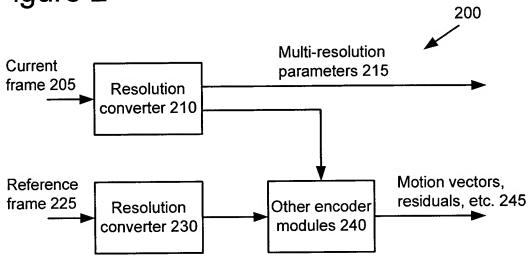
Express Mail Label No. EV331582817US

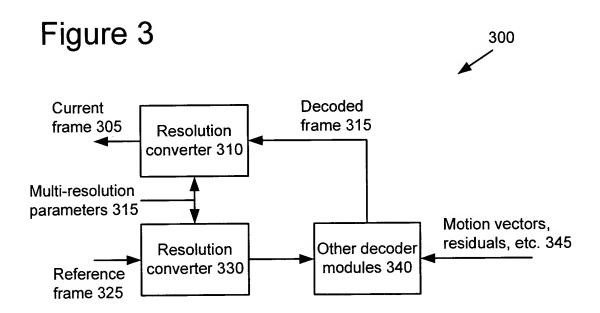
Title: MULTI-RESOLUTION VIDEO CODING AND DECODING

Attorney Matter No.: 3382-65017/KBR

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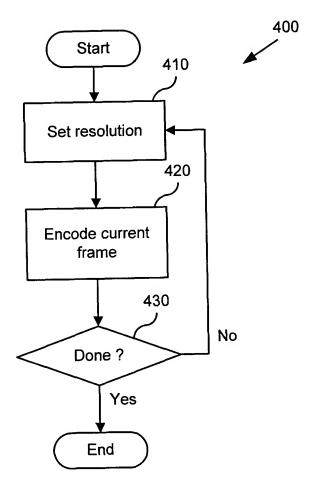




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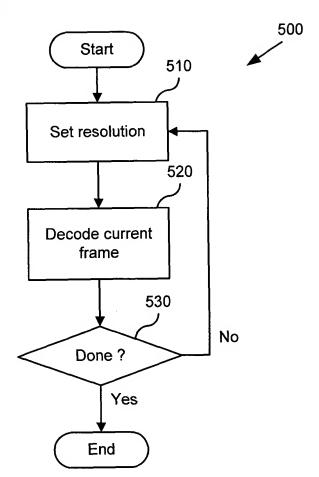




Inventor (s): Holcomb et al.

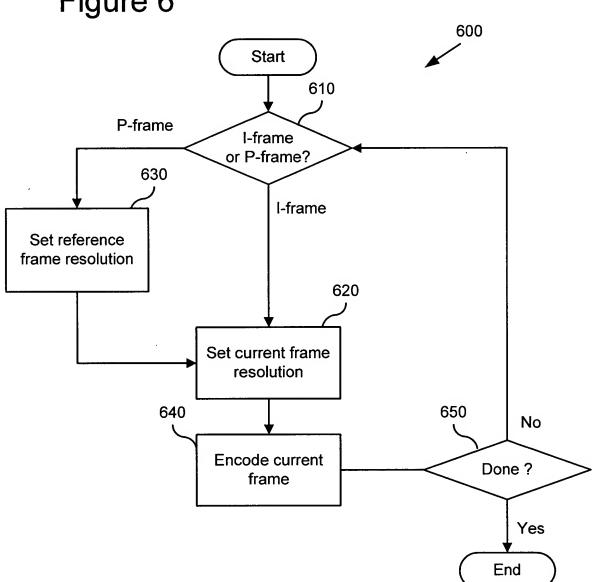
Date of Deposit: August 19, 2003
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Figure 5



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Inventor (s): Holcomb et al.

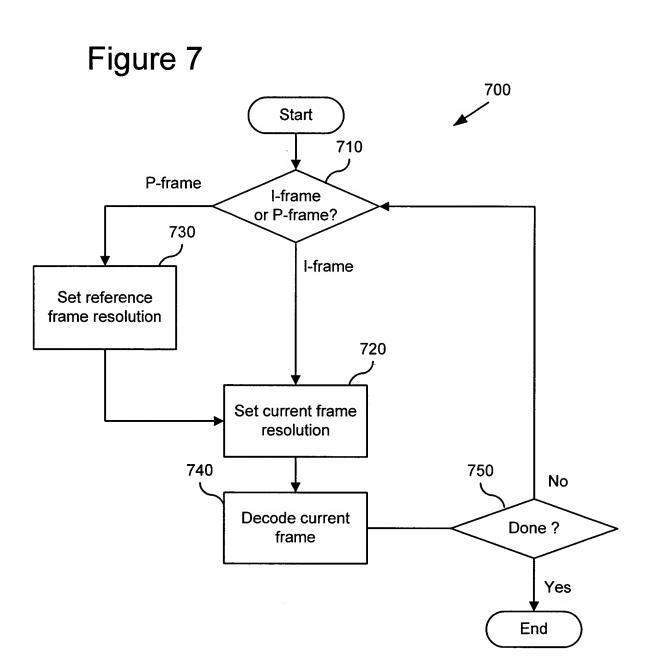
Date of Deposit: August 19, 2003

Express Mail Label No. EV331582817US

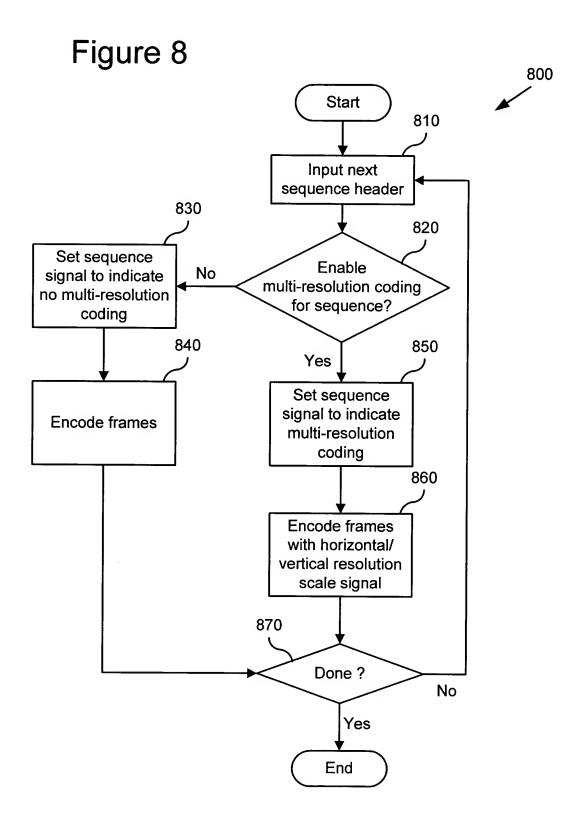
Title: MULTI-RESOLUTION VIDEO CODING AND DECODING

Attorney Matter No.: 3382-65017/KBR

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Inventor (s): Holcomb et al.

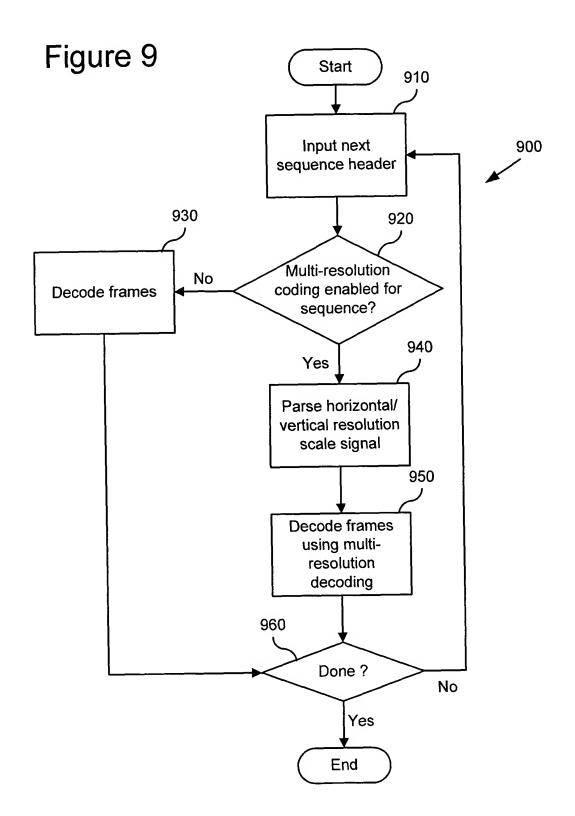
Date of Deposit: August 19, 2003

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Title: MULTI-RESOLUTION VIDEO CODING AND DECODING

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Figure 10

```
1000
   AW1 = 70
   AW2 = 5
   AW3 = -11
  downsamplefilter_line(x[])
              y[0] = (((x[0] + x[1]) * AW1 + (x[2] + x[0]) * AW2 + (x[3] + x[1]) * AW3 + RND_DOWN)
  >> 7)
           for(Int j = 2 j < Nu - 2 j += 2) {
                            y[j] = (((x[j] + x[j+1]) * AW1 + (x[j-1] + x[j+2]) * AW2 + (x[j-2] + x[j+3]) * AW3 +
  RND DOWN) >> 7)
              }
              y[Nu-2] = (((x[Nu-2] + x[Nu-1]) * AW1 + (x[Nu-3] + x[Nu-1]) * AW2 + (x[Nu-4] + x[Nu-1]) * AW2 + (x[Nu-4] + x[Nu-4]) * AW1 + (x[Nu-4] + x[Nu-4]) * AW2 + (x[Nu-4] + x[Nu-4]) * AW3 + (x[Nu-4] + x[Nu-4]) * AW4 + x[Nu-4]) * AW4 + x[Nu-4] + x[Nu-4]) * AW4 + x[Nu-4] + x[Nu-4] + x[Nu-4] 
 2]) * AW3 + RND_DOWN) >> 7)
             for(j = 0 j < Nu j+=2) {
                          x[j] = CLIP(y[j])
                          x[j+1] = 0
             }
}
```

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Figure 11

```
SW1 = 28
                                               1100
SW2 = 6
SW3 = -3
upsamplefilter_line(x[])
  y[0] = ((x[0] * SW1 + x[0] * SW2 + x[2] * SW3 + x[4] + RND_UP) >> 5)
  y[1] = ((x[0] * SW1 + x[2] * SW2 + x[0] * SW3 + x[2] + RND_UP) >> 5)
  y[2] = ((x[2] * SW1 + x[0] * SW2 + x[4] * SW3 + x[6] + RND_UP) >> 5)
  y[3] = ((x[2] * SW1 + x[4] * SW2 + x[0] * SW3 + x[0] + RND_UP) >> 5)
  for(j = 4j < Nu - 4j += 2) {
     y[j] = ((x[j] * SW1 + x[j-2] * SW2 + x[j+2] * SW3 + x[j+4] + RND_UP) >> 5)
     y[j+1] = ((x[j] * SW1 + x[j+2] * SW2 + x[j-2] * SW3 + x[j-4] + RND_UP) >> 5)
  }
  y[Nu-4] = ((x[Nu-4] * SW1 + x[Nu-6] * SW2 + x[Nu-2] * SW3 + x[Nu-2] + RND_UP)
  y[Nu-3] = ((x[Nu-4] * SW1 + x[Nu-2] * SW2 + x[Nu-6] * SW3 + x[Nu-8] + RND UP)
  y[Nu-2] = ((x[Nu-2] * SW1 + x[Nu-4] * SW2 + x[Nu-2] * SW3 + x[Nu-4] + RND_UP)
  y[Nu-1] = ((x[Nu-2] * SW1 + x[Nu-2] * SW2 + x[Nu-4] * SW3 + x[Nu-6] + RND_UP)
>> 5)
  for(j = 0 j < Nu j++)
    x[j] = CLIP(y[j])
}
```